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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,193

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Alain Durand

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05/08/2009

Thomson Licensing LLC

P.O. Box 5312

Two Independence Way

PRINCETON, NJ 08543-5312

EXAMINER

VAUGHAN, MICHAEL R

ART UNIT

PAPER NUMBER

2431

MAIL DATE

DELIVERY MODE

05/08/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,193	Applicant(s) DURAND ET AL.	
	Examiner MICHAEL R. VAUGHAN	Art Unit 2431	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

The instant application having Application No. 10/532193 is presented for examination by the examiner. Claims 1-4 remain pending.

Response to Arguments

Applicant's arguments, filed 3/13/09, with respect to the rejection(s) of claim(s) 1-4 under have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly cited prior art.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, it is unclear which "a symmetric key": the first, second, or new. The phrase "method comprising the steps that consist" has two problems of indefiniteness. The first being that the words comprising and consist contradict one another. Comprises means have at least and consist means having only. It appears

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this was the start of another claim in that it was preceded by a period and seems to refer back the same method as its claiming. This raises the question of whether there are two methods and indefiniteness in not knowing which method is being referenced by the dependent claims. Claim 4 is rejected for the same phrase. Claims 2 and 3 are rejected for being dependent claims. Appropriate correction is required.

As per claim 3, the encryption function seems contradict the one-way derivation functions. Encryption implies it can be undone or decrypted. Hash functions are one-way.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Menezes et al. "Handbook of Applied Cryptography, PASSAGE." Handbook of Applied Cryptography, CRC Press Series on Discrete Mathematics and its Applications, Boca Raton, FL, CRC Press, US, 1997, pages 497-553, hereinafter Menezes, in view of USP Application Publication 2005/0025091 to Patel et al., hereinafter Patel.

As per claim 1, Menezes teaches a method for renewing a symmetric key in a communication network comprising a device of a first type [A] containing:

a first symmetric key [session key] for encrypting the data to be sent to a device of a second type [B] connected to the network (pg. 497); and

said first symmetric key encrypted with a second symmetric network key known only by at least one device of a second type connected to said network [session key encrypted by key K; pg. 497];

the method comprising the steps that consist, for the device of a first type, in:

(a) generating a random number [ra; pg. 497] ;

(c) encrypting the data to be transmitted with the new symmetric key [pg. 497];

and

(d) transmitting to a device of a second type [B], via said network:

the data encrypted with the new symmetric key [session key is used to encrypt the data, therefore it is inherent data will be encrypted; pgs 497-499]

the random number [ra; pg. 497]; and

said first symmetric key [W] encrypted with the second symmetric network key [K] (pg. 497-498). Menezes is silent in disclosing computing a new symmetric key as a function of the first symmetric key and said random number. Menezes teaches the session keys needs to be updated and are a function of a random number but does not explicitly teach incorporating a previous session key into the function. Patel teaches one way of updating a session key is by hashing the session key with a random number

to generate a new session key (0055). It is well known that session keys need to be updated frequently to secure the system. Updating the key as taught by Patel also increases the security by not having to send the new key across the channel. Only the random number need be sent and both parties can derive the new key. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Patel into the system of Menezes because it would provide a mechanism for securely updating the session keys.

As per claim 2, Menezes teaches the function used to compute the new symmetric key is a one-way derivation function [hk; pg. 499].

As per claim 3, Menezes teaches the function is a hash or encryption function hk; pg. 499].

As per claim 4, Menezes teaches the device of a second type that receives data transmitted at step (d), in:

(e) decrypting, with the second symmetric network key, the encryption of the first symmetric key [B uses the K to decrypt and obtain W; pg. 497];

(f) determining, based on the first symmetric key obtained at step (e) and on said random number, the new symmetric key [pg. 498]; and

(g) decrypting the data received with the new symmetric key thus obtained [session key is used to encrypt the data, therefore it is inherent data will be encrypted; pgs 497-499].

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure is listed on the enclosed PTO-892 form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL R. VAUGHAN whose telephone number is (571)270-7316. The examiner can normally be reached on Monday - Thursday, 7:30am - 5:00pm, EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. R. V./

Examiner, Art Unit 2431

/Ayaz R. Sheikh/

Supervisory Patent Examiner, Art Unit 2431